

REMARKS

Claims 1 - 19 are currently pending in the application. Examiner rejected Claim 13 under 35 U.S.C. § 112 as being indefinite and Claims 1-20 under U.S.C. §103.

In response to Examiner's rejections Applicants have cancelled Claim 20 and amended Claims 1-19. All amendments are supported in the specification, as explained below. No new matter has been introduced.

A typographical error has been corrected in Claim 13, so that this claim now depends from Claim 12. The amended claim 13 is fully supported in the specification, ¶¶ 0005 and 0008. No new matter has been introduced. A typographical error has been corrected in Claim 3, where the incorrect word "trisonylphenyl" has been replaced with the correct word "trisonylphenol". This change is fully supported in the specification, ¶ 0017. No new matter has been introduced.

Claim 6 has been amended so as to depend from Claim 3. Amended Claim 6 is fully supported in the specification, ¶¶ 0005 and 0008. No new matter has been introduced.

Claims 1 - 13 have been amended and now recite a stabilized polypropylene for use in fiber processing. These amended claims are fully supported in the specification: see, e.g., ¶¶ 0005 - 0009, 0024, 0030-0032, 0041. No new matter has been introduced.

Claims 14 - 19 have been amended and now recite a method for improving the melt viscosity of polypropylene for use in fiber processing. These amended claims are fully supported in the specification: see e.g. ¶¶ 0005, 0008, 0017, 0030 . No new matter has been introduced.

I. Rejection of Claim 13 under 35 USC § 112.

Examiner has rejected original Claim 13 because it improperly refers to itself. A typographical error has been corrected, whereby "13" has been replaced by "12". As a result, Claim 13, as amended, now depends from Claim 12. The amended claim 13 is fully supported in the specification, ¶¶ 0005 and 0008. No new matter has been introduced.

II. Rejection of claims 1 and 2 under 35 USC § 103

Examiner has rejected claims 1 and 2 under 35 U.S.C. § 103(a) as being unpatentable over Orloff (US 3, 115, 463). Applicants respectfully traverse these rejections.

MPEP 2143 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met.

First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference Second, there must be a reasonable expectation of success. Finally, the prior art reference . . . must teach or suggest all the claim limitations.

Claims 1 and 2 have been amended and now recite a stabilized polypropylene composition to be used in the making of fibers. These amendments are fully supported in the specification, e.g. ¶¶ 0005, 0008, 0017, 0030. No new matter has been introduced. By contrast, the Orloff patent recites stabilized lubricating oils, which are entirely distinct compositions with different uses. There is no mention in Orloff of polypropylene as a component in any

composition. The Orloff patent, therefore, does not teach or suggest all the features of claims 1 and 2 as amended.

There is no suggestion or motivation in the Orloff patent for one of ordinary skill in the art to use the lubricating oil compositions recited therein as a component in a stabilized polypropylene. The lubricating oils themselves are the subject of this reference, and the compositions are directed toward stabilizing the oils against oxidation. There is no obvious motivation to combine these oils with polypropylene.

For all of these reasons, applicants respectfully submit that claims 1 and 2, as amended, are patentable over Orloff.

III. Rejection of claims 1, 2, 9, and 14 under 35 USC § 103

Examiner has rejected claims 1, 2, 9, and 14 under 35 U.S.C. § 103(a) as being unpatentable over Cohen (US 4, 652, 385). Applicants respectfully traverse these rejections.

Claims 1, 2, and 9 have been amended and now recite a stabilized polypropylene composition to be used in the making of fibers. These amendments are fully supported in the specification, e.g. ¶¶ 0005, 0008, 0017, 0030. No new matter has been introduced. Claim 14 has been amended and now recites a method for improving the melt viscosity of polypropylene by applying a stabilizer composition to the polypropylene. This amendment is fully supported in the specification, e.g. ¶¶ 0005, 0008, 0017, 0030. No new matter has been introduced.

By contrast, the Cohen patent recites stabilized lubricating oil compositions, which are entirely distinct compositions with different uses. There is no mention in Cohen of polypropylene as a component in any composition. The Cohen patent, therefore, does not teach

or suggest all the features of claims 1, 2, and 9, as amended, and therefore does not meet a criterion of MPEP 2143, as stated above.

There is no suggestion or motivation in the Cohen patent for one of ordinary skill in the art to use the lubricating oil compositions recited therein as a component in a stabilized polypropylene. The lubricating oils themselves are the subject of this reference, and the compositions are directed toward stabilizing the oils against oxidation. There is no obvious motivation in the reference to combine these oils with polypropylene.

According to 35 U.S.C. § 103(a), the subject matter to be patented may be rejected as obvious over the prior art only if the subject matter "as a whole" would have been rendered obvious. In the case of claims 1, 2, and 9, as amended, the subject matter is a polypropylene which is coated with a stabilizing composition for use in fiber processing. The subject matter of Claim 14, as amended, is a method of applying a stabilizer composition to polypropylene to improve the melt viscosity of the polypropylene during the extrusion of fibers. The Cohen patent, by contrast, recites only lubricating oils containing compositions to stabilize the oils against oxidation while they are acting as lubricants. Cohen addresses a completely different problem to that of the claims under examination. It would not be obvious to one skilled in the art to combine the compositions recited in Cohen with polypropylene to improve the processing of polypropylene fibers.

For all of these reasons, applicants respectfully submit that claims 1, 2, 9, and 14, as amended, are patentable over Cohen.

IV. Rejection Under 35 U.S.C. § 103 over Calabrese et. al.

Examiner has rejected claims 1-20 under 35 U.S.C. § 103 as being unpatentable over Calabrese et. al. (US 6, 348,614). Applicants respectfully traverse these rejections.

Claim 20 has been cancelled. Claims 1 - 13 have been amended and now recite a stabilized polypropylene composition to be used in the making of fibers. These amendments are fully supported in the specification, e.g., ¶¶ 0005 - 0009, 0024, 0030-0032, 0041. No new matter has been introduced. Claims 14 - 19 have been amended and now recite a method of applying a stabilizer composition to polypropylene to improve the melt viscosity of the polypropylene during the processing of fibers. These amendments are fully supported in the specification, e.g. ¶¶ 0005, 0008, 0017, 0030. No new matter has been introduced

MPEP 2143 states:

To establish a *prima facie* case of obviousness, three basic criteria must be met.

First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference Second, there must be a reasonable expectation of success. Finally, the prior art reference . . . must teach or suggest *all the claim limitations*. (emphasis added.)

Claim 1, as amended, recites "A stabilized polypropylene for use in fiber processing, comprising a polypropylene, said polypropylene being coated with a stabilizer system consisting essentially of: a phenolic antioxidant; a liquid phosphite; and a liquid carrier." While the Calabrese patent discloses, in passing, a composition containing these classes of substances,

including polypropylene, there is no motivation in this reference, explicit or implicit, for one of ordinary skill in the art to try the particular stabilizers claimed in this application in fiber processing. Calabrese teaches only that these stabilizers are effective in preventing "scorch" in foams. Scorch is described as a discoloration, which is quantified by optical measurements. Those skilled in the art know that this is not an issue in the manufacturing of polypropylene fibers.

Furthermore, Calabrese discloses a very large number of stabilizing compounds (Col. 3, lines 44-67; col. 4, lines 1-6, claims 7 and 8). MPEP 2145 X B indicates that is improper to reject claims under U.S.C. § 103 when the applicant would have to "try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave . . . no direction as to which of many possible choices is likely to be successful . . .". In re O'Farrell, 853 F.2d 894, 903, 7 USPQ2d 1673, 1681 (Fed. Cir. 1988) (citations omitted). One of ordinary skill in the art, desiring to create a stabilized polypropylene for the purpose of making fibers, is not provided with any motivation or suggestion to try any one combination of these stabilizers over any other. In addition, since there is no suggestion or motivation as to which of the many stabilizers to use, any consideration of the amount of stabilizers to be used is rendered irrelevant.

Applicants' Claim 1, as amended, recites "[a] stabilized polypropylene *for use in fiber processing* . . ." (emphasis added). Again, the Calabrese patent does not teach or suggest any such feature. This reference teaches only the prevention of "scorch" (discoloration by oxidation) in compositions used to make foams, not fibers.

Claim 14, as amended, recites "[a] method *for improving the melt viscosity of polypropylene for use in fiber processing* (emphasis added). As stated above, the Calabrese patent teaches only stabilization against "scorch" and compositions to be used in the making of

foams. It does not teach, implicitly or explicitly, improving melt viscosity and fiber processing, which are two explicit features of amended Claim 14.

For all of the reasons stated in this section, then, applicants respectfully submit that the three criteria for establishing prima facie obviousness, stated in MPEP 2143, are not met. In particular, the features of Claims 1 and 14, as amended, are not all taught by the Calabrese reference. Claims 2-13, as amended, depend from amended claim 1, and are properly narrower than amended Claim 1. Therefore, the arguments stated above concerning amended claim 1 also apply to claims 2 - 13 as amended. Claims 15 - 19, as amended, depend from amended Claim 14 and are properly narrower than amended claim 14. Therefore, the arguments stated above concerning amended Claim 14 also apply to Claims 15 - 19 as amended. Original Claim 20 has been cancelled.

CONCLUSION

Applicants believe that the foregoing amendments and remarks have overcome or rendered moot all grounds for rejection, and that the application is in a condition for allowance. Applicants therefore respectfully request prompt action on the claims and allowance of the application. If the Examiner believes that personal communication will expedite prosecution of the application, the Examiner is invited to telephone Applicants' undersigned agent directly.

AUTHORIZATION

Applicants believe that only a one-month extension of time is required to make submission of the response timely. However, in the event that an extension of time beyond one month is required,

Applicants hereby submit a petition for such extension of time as may be necessary to make this response timely. Applicants further believe that no fees are due for additional claims. The Commissioner is hereby authorized to charge any necessary additional fees for extension of time or additional claims to deposit account No. 502194. A duplicate of this Authorization is enclosed.

Respectfully Submitted,

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MARKED-UP COPY OF CLAIMS SHOWING CHANGES

1. (Amended) A [stabilization system for improving the melt viscosity of] stabilized polypropylene [during] for use in fiber processing comprising:
a polypropylene, said polypropylene being coated with a stabilizer system consisting essentially of: a phenolic anti-oxidant; a liquid phosphite; and a liquid carrier.
2. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 1 wherein the phenolic anti-oxidant is a cinnamate derivative.
3. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 2 wherein the liquid phosphite is [trisnonylphenyl] trisnonylphenol phosphite.
4. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 3 wherein the liquid carrier is mineral oil.
5. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 4 wherein the phenolic anti-oxidant is octadecyl 3,5 -di -tert -butyl-4-hydroxyhydrocinnamate.

6. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 3 [5 comprising] wherein said stabilization system contains approximately 150 -500 ppm trisnonylphenol phosphite.
7. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 6 [comprising] wherein said stabilization system contains approximately 50 -100 ppm octadecyl 3,5-di-tert-butyl-4 hydroxyhydrocinnamate.
8. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 7 additionally comprising approximately 150- 500 ppm of tris(2,4-di-tert-butylphenyl)phosphite.
9. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 1 wherein the phenolic anti-oxidant and the liquid phosphite are in a concentration ratio of about 1:2.0 to about 1:6.7.
10. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 9 wherein the liquid phosphite is trisnonylphenol phosphite.
11. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 10 wherein the phenolic anti-oxidant is octadecyl 3,5-di-tert -butyl-4-hydroxyhydrocinnamate.
12. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim 11 wherein the liquid carrier is mineral oil.

13. (Amended) The [stabilization system] stabilized polypropylene as claimed in claim [13] 12 additionally comprising approximately 150- 500 ppm of tris(2,4-di-tert-butylphenyl)phosphite.

14. (Amended) A [stabilizer mixture suitable] method for improving the melt viscosity of polypropylene [which mixture, based on the mass of polypropylene,] for use in fiber processing, comprising: applying a stabilizer composition to a polypropylene, said polypropylene being in powder, flake or pellet form, wherein said stabilizer composition consists essentially of: approximately 50 -100 ppm of a phenolic anti-oxidant; approximately 150-500 ppm of a liquid phosphite; and a liquid carrier.

15. (Amended) The [stabilizer mixture] method as claimed in claim 14 wherein the liquid phosphite is [trisnonylphenyl] trisnonylphenol phosphite.

16. (Amended) The [stabilizer mixture] method as claimed in claim 15 wherein the phenolic anti-oxidant is a cinnamate derivative.

17. (Amended) The [stabilizer mixture] method as claimed in claim 16 wherein the phenolic anti-oxidant is octadecyl 3,5 -di-tert-butyl-4-hydroxyhydrocinnamate.

18. (Amended) The [stabilizer mixture] method as claimed in claim 17 wherein the liquid carrier is mineral oil.

19. (Amended) The [stabilizer mixture] method as claimed in claim 18 additionally comprising applying approximately 150-500 ppm of tris(2,4-di-tert-butylphenyl)phosphite to said polypropylene.

[20. A stabilization system suitable for improving the melt viscosity of polypropylene homopolymer consisting essentially of: 50 -100 ppm of octadecyl 3,5-di-tert-butyl-4-hydroxyhydrocinnamate phosphite; 150 -500 ppm of trisnonylphenol phosphite; and mineral oil.]

Applicants hereby submit a petition for such extension of time as may be necessary to make this response timely. Applicants further believe that no fees are due for additional claims. The Commissioner is hereby authorized to charge any necessary additional fees for extension of time or additional claims to deposit account No. 502194. A duplicate of this Authorization is enclosed.

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